Cities as labor markets:
relevance to China city cluster development

By Alain Bertaud
Urbanization Project, New York University
Beijing, July 2 2015
abertaud@stern.nyu.edu
The efficiency of large labor markets is the main cause of ever-growing cities

• Cities are primarily labor markets
  • Large labor markets are more productive than smaller ones
  • The higher productivity of larger labor markets is driving the growth of cities,
A city’s productivity depends on its ability to maintain mobility as its built-up area is growing

- Commuting time and commuting cost are limiting the size of labor markets and therefore limiting urban productivity

- As Prud’homme writes in his paper (1-): “[…] the benefits associated with city size are only potential, they are contingent upon the quality of management.” and I will add, to the speed of transport.

---

The spatial pattern of labor mobility

Most modern cities follow C. the composite model
Model D, exists only in the mind of planners
Schematic example of labor market fragmentation

- All jobs are concentrated in b, c and d, each location contains 1/3 of all jobs.
- Workers located between b and d can reach 100% of all the jobs in less than one hour.
- Workers located between a and b can reach only the jobs located in b and c in less than one hour.
- Workers living between d and e can reach only the jobs located in c and d.
- 50% of the workers (between b and d) have access to 100% of the jobs in less than 1 hour.
- While the other 50% (between a and b and between d and e) have access to only 2/3 of all the jobs.
- Therefore the effective size of the labor markets is only 83% of all the jobs available in the city. (50% of 100% + 50% of 2/3 = 83.3%).
- If the speed of transport could be increased so that one could travel from a to d in less than one hour, instead of the 1 hour 30 minutes as shown above, then the effective size of the job market would be 100% of all jobs available.
different commuting speeds have an impact on the effective size of the labor market depending on the spatial distribution of jobs.
The number of jobs accessible in a given time depends on the average speed of the transport system.
In large metropolitan areas, most trips are from suburb to suburb - Example of Paris metropolitan area.
In Seoul Metropolitan areas, most of the jobs and population added between 2000 and 2010 have been in suburbs.
Most of the increase in population and jobs in Seoul Metropolitan areas between 2000 and 2010 has been in the suburbs.
Affordability of land and floor space allows all income groups to participate in the labor market

- Housing affordability requires large differences in land and housing prices within a metropolitan area

- Large differences in land and housing prices are possible only with large density differences within a metropolitan area

- The ideal “Compact City” being often promoted by planners is incompatible with housing affordability

- Large city clusters cannot be “compact”, meaning having a uniform high density, although they may use land efficiently
Housing affordability is linked to efficient transport

• Efficient transport increases the supply of land where worker can afford housing

• Efficient transport is therefore key to housing affordability

• Inefficient transport either force workers to live close to their workplace in exiguous dormitories or to spend long hour commuting at a high social cost
Cities viewed as labor markets: operational implications for large city clusters in China

• Diversity of transport modes and speed of transport is indispensable to the productivity of large city clusters.

• If speed of transport can be achieved in large city clusters, their productivity will be higher than in any urban form existing today.

• The planners' objective should be to maximize the average number of jobs reachable within less than one hour commuting time (one way).
The development of existing large city clusters are part of China’s National Plan on New Urbanization (2014-2020)
China’s National Plan on New Urbanization (2014-2020)

Hub and spoke would see China’s 11 networks of cities integrating and growing rapidly

Economic regions

<table>
<thead>
<tr>
<th>Regional hubs</th>
<th>Number of cities in region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing/Tianjin</td>
<td>28</td>
</tr>
<tr>
<td>Shenyang/Dalian</td>
<td>22</td>
</tr>
<tr>
<td>Qingdao/Jinan</td>
<td>35</td>
</tr>
<tr>
<td>Xian</td>
<td>8</td>
</tr>
<tr>
<td>Zhengzhou</td>
<td>23</td>
</tr>
<tr>
<td>Shanghai*</td>
<td>58</td>
</tr>
<tr>
<td>Chengdu/Chongqing</td>
<td>31</td>
</tr>
<tr>
<td>Wuhan</td>
<td>27</td>
</tr>
<tr>
<td>Changsha</td>
<td>20</td>
</tr>
<tr>
<td>Xiamen/Fuzhou</td>
<td>14</td>
</tr>
<tr>
<td>Guangzhou/Shenzhen**</td>
<td>23</td>
</tr>
</tbody>
</table>

* Yangtze River Delta Cluster.
** Pearl River Delta Cluster, with strong linkages to Hong Kong.

Source: McKinsey Global Institute analysis
Beijing Tianjin Hebei cluster (partial representation only on figure)

33.5 million people in 2010. Of which 15.6 million people dispersed in smaller towns.

Can a transport system be developed to integrate the population of Beijing-Tianjin-Hebei cluster in one labor market?